Updates on NYISO’s Comprehensive System Planning Process

Philip Chorazy
Senior Engineer, Public Policy and Interregional Planning, NYISO

Interregional Planning Stakeholder Advisory Committee (IPSAC) Meeting

May 15, 2020
Reliability Planning Process

- Two-year process starting in even years
- Reliability Needs Assessment (RNA)
  - Evaluates the adequacy and security of the Bulk Power Transmission Facilities over a seven-year Study Period (years four through ten of the next ten years), and identifies Reliability Needs
  - Reliability Needs are defined as violations of Reliability Criteria (i.e., NERC, NPCC and NYSRC)
- Comprehensive Reliability Plan (CRP)
  - Develops a plan to satisfy the Reliability Needs identified in RNA, if any
- An updated Reliability Planning Process Manual (Manual 26) was approved on December, 2019, with certain changes related with the inclusion rules
2020 Reliability Needs Assessment

- Will incorporate impacts of Peaker Rule into base case reliability analysis.
  - New York State Department of Environmental Conservation (DEC) adopted a regulation to limit nitrogen oxides (NOx) emissions from simple-cycle combustion turbines ("Peaking Units") (referred to as the "Peaker Rule")
  - The Peaker Rule required all impacted plant owners to file compliance plans by March 2, 2020

- Will include a scenario evaluating the impacts of 70 percent of energy produced from renewable resources by 2030 ("70 by 30") for both Transmission Security and Resource Adequacy.

- 1st pass RNA results are planned to be presented in June 2020.
Proposed Projects Included in the 2020 RNA Base Case

<table>
<thead>
<tr>
<th>Project Types</th>
<th>Queue #</th>
<th>Project Name</th>
<th>SP MW</th>
<th>Interconnection Status</th>
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</thead>
<tbody>
<tr>
<td>Large Gens</td>
<td></td>
<td>Cassadaga Wind</td>
<td>126.5</td>
<td>CY17</td>
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<tr>
<td></td>
<td>396</td>
<td>Baron Winds</td>
<td>238.4</td>
<td>CY17</td>
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<td></td>
<td>422</td>
<td>Eight Point Wind Energy Center</td>
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<td>CY17</td>
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<td>505</td>
<td>Ball Hill Wind</td>
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<td></td>
<td>546</td>
<td>Roaring Brook Wind</td>
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<td>Regulated Transmission Solutions</td>
<td>Q545A</td>
<td>Empire State Line</td>
<td>n/a</td>
<td>completed TIP Facility Study (Western NY PPTPP)</td>
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<td></td>
<td>556</td>
<td>Segment A Double Circuit</td>
<td></td>
<td>TIP Facility Study in progress (AC PPTPP)</td>
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<td></td>
<td>543</td>
<td>Segment B Knickerbocker-Pleasant Valley 345 kV</td>
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<td>430</td>
<td>Cedar Rapids Transmission Upgrade</td>
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<td>CY17</td>
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<tr>
<td>System Deliverability Upgrades (SDUs)</td>
<td></td>
<td>Leeds-Hurley SDU</td>
<td>n/a</td>
<td>SDU triggered for construction in CY11</td>
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</table>

Acronyms:
- CYxx: (Interconnection) Class Year (Facilities Studies) + last 2 digits of the year
- TIP: Transmission Interconnection Process
- AC PPTPP: Alternative Current Public Policy Transmission Planning Process
## Generator Status Update

Generator Status Updates from March 1, 2019 through April 1, 2020

<table>
<thead>
<tr>
<th>Generating Unit</th>
<th>Zone</th>
<th>Current Generator Status</th>
<th>Date of Generator Status Change, if applicable</th>
<th>Initial Testing Date, if applicable</th>
<th>Generator Deactivation Assessment Start Date, if applicable</th>
<th>Generator Deactivation Assessment Completion Date, if applicable</th>
<th>PSC Retirement/Mothball Notice Date, if applicable</th>
<th>Proposed Retirement/Mothball Date, if applicable</th>
<th>Rescinded Notice Date, if applicable</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Lyonsdale</td>
<td>E</td>
<td>Retired</td>
<td>07/18/2019</td>
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<td>04/18/2019</td>
<td>06/12/2019</td>
<td>03/28/2019</td>
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<td>GILBOA_1</td>
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<td>Auburn-State St.</td>
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<td>08/01/2019</td>
<td>04/09/2019</td>
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<tr>
<td>Monroe Livingston</td>
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</table>

*Per the NYISO’s Generator Deactivation Process, the earliest date on which the Generator might retire is 8/9/19.
## Generator Status Update (continued)

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<th>Rescinded Notice Date, if applicable</th>
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<td>Cayuga 1</td>
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<td>Mothball-8/1/2019 Retirement - 03/02/2020</td>
<td>Mothball-10/28/2019</td>
<td>Mothball-6/29/2019 Retirement-2/17/2020</td>
<td>Mothball-<strong>10/1/2019 Retirement</strong> 5/17/2020</td>
<td><strong>10/1/2019</strong></td>
<td>*Per the NYISO's Generator Deactivation Process, the earliest date on which the Generator might mothball is 10/31/19. **Pending PSC approval Per the NYISO's Generator Deactivation Process, the earliest date on which the Generator might mothball is 06/01/20.</td>
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<td>Albany LFGE</td>
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<td>07/12/2019</td>
<td>09/20/2019</td>
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<td>*Per the NYISO's Generator Deactivation Process, the earliest date on which the Generator might retire is 10/11/19.</td>
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<td>CRICKET__VALLEY CC1</td>
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<td>HUDSON AVE_GT_3</td>
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<td>*Per the NYISO's Generator Deactivation Process, the earliest date on which the Generator might retire is 03/12/2020.</td>
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<td>Transitioned from Generator to BTM/NG Resource</td>
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<td>CRICKET VALLEY CC3</td>
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<td>E</td>
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<td>Cayuga 2</td>
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</tbody>
</table>

- **Transitioned from Generator to BTM/NG Resource**
  - **Pending PSC Approval**
  - **Per the NYISO’s Generator Deactivation Process, the earliest date on which the Generator might retire is 06/01/2020.**
Local Transmission Owner Plans (LTP)

- The NYISO's Comprehensive System Planning Process (CSPP) begins with the Local Transmission Owner Planning Process (LTPP). The LTPP allows interested parties to examine the transmission system plans of each of the New York Transmission Owners individually.

- Local Transmission Owner Planning Process (LTPP) link:

- 2020 Load and Capacity Data Report (Gold Book) containing BPTF LTPs and firm non-BPTF LTPs (Section VII)
Existing transmission facilities modeled out-of-service

- Con Edison’s B3402 and C3403 345 kV cables with no return date
- Moses-St. Lawrence L33P through winter 2022
Short-Term Reliability Process

- Accepted by FERC for a May 1st, 2020 effective date
- Combines the Generator Deactivation Process along with analyzing other impacts on the Bulk system that could impact reliability.
- Quarterly reliability assessments of needs arising in next five years, focusing on the next three years.
- Reliability Planning Process addresses years four through ten.
Economic Planning Process

- Two-year process: Congestion Assessment and Resource Integration Study (CARIS)
  - Phase I: Study Phase
    - Performed in alternate years to the RNA
    - Determine three top congested locations in NYCA
    - Develop generic solutions – transmission, generation, demand response, and energy efficiency
    - Provide information to developers and marketplace
  - Phase II:
    - Specific Projects
      - Transmission projects seeking regulated cost recovery under NYISO Tariff
      - Eligibility threshold: Cost over $25M, benefit/cost ratio over 1.0, load payment saving over cost, 80% beneficiary vote
    - Additional CARIS Studies
      - Assumptions and scenarios customizable
      - Confidential except for basic information
2019 CARIS Phase 1: Congestion Groupings
Status of CARIS

- The 2019 CARIS Phase 1 Draft Report
  - Presented at the April 23, 2020 Electric System Planning Working Group (ESPWG)
  - Final draft scheduled for July 2020 pending NYISO Board of Directors approval

- Includes Base Case assumptions and results

- Top three congested groupings:
  - Central East
  - Central East – New Scotland – Knickerbocker
  - Volney – Scriba

- A scenario studying 70% of NY energy consumption from renewables by 2030 (70x30) will be included in a updated version of the report.
Public Policy Transmission Planning Process (PPTPP)

- Two-year process performed in parallel with RNA/CRP

Phase I: Identify Needs and Assess Solutions
- NYISO solicits transmission needs driven by Public Policy Requirements
- PSC identifies transmission needs and defines additional evaluation criteria
- NYISO holds Technical Conference and solicits solutions (transmission, generation, or EE/DR)
- NYISO performs Viability and Sufficiency Assessment (VSA)

Phase II: Transmission Evaluation and Selection
- NYISO staff evaluates viable and sufficient transmission solutions and recommends the more efficient or cost-effective solution
- Stakeholder review and advisory votes at BIC and MC
- NYISO Board may select a transmission solution for purposes of cost allocation and recovery under the NYISO Tariff
Western NY Project Selection

- NYISO staff recommended Empire State Line Proposal 1 (T014), proposed by NextEra Energy Transmission New York, as the more efficient and cost effective solution.

- In October 2017, the NYISO Board of Directors selected the NextEra project.

AC Transmission Project Selection

- In April 2019, the NYISO Board of Directors selected the Segment A Double-Circuit (T027) project, proposed jointly by North American Transmission (“NAT”) and the New York Power Authority (“NYPAt”), as the more efficient or cost effective solution for Segment A. The Board also concluded that for Segment B, the more efficient or cost effective solution is the New York Energy Solution (NYES) Segment B (T019) project, which was jointly proposed by the Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid”) and the New York Transco, LLC (“Transco”).

AC TRANSMISSION PROJECT SELECTION

- **Segment A: T027 (Central East)**
  - New double-circuit Edic to New Scotland 345 kV line
  - Decommission Porter to Rotterdam 230 kV lines
  - 115/230/345 kV connection to Rotterdam

- **Segment B: T019 (UPNY/SENY)**
  - New Knickerbocker to Pleasant Valley 345 kV line
  - Rock Tavern substation terminal upgrades
  - Shoemaker – Sugarloaf 138 kV line
Interregional Coordination

- Through the NYISO’s Transmission Interconnection Procedures, the NYISO also coordinates with neighboring regions to identify the impact, if any, of the Public Policy Transmission Projects on the neighboring regions.
  - System Impact Studies have been completed for the selected Western NY and AC Transmission projects.
  - Facilities Study has been completed for the selected Western NY project.
  - Facilities Studies are being performed for the selected AC Transmission projects to finalize the Network Upgrade Facilities including the upgrades to address New York-New England transfer degradation.
Future Public Policy Transmission Needs

- The NYISO initiated the 2018-2019 PPTPP cycle in August 2018 by issuing a solicitation for proposed transmission needs driven by Public Policy Requirements. There have been no transmission needs identified in this cycle.
- The NYISO will initiate the 2020-2021 PPTPP cycle in August 2020 by issuing a solicitation for proposed transmission needs driven by Public Policy Requirements.
Stakeholder Material

- The NYISO Comprehensive System Planning Process is regularly discussed at the Electric System Planning Working Group (ESPWG) and Transmission Planning Advisory Subcommittee (TPAS).
  - https://www.nyiso.com/espwg
  - https://www.nyiso.com/tpas

- Study documentation is available at:
  - https://www.nyiso.com/cspp
Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system